# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

# Soil Erosion

## Sheet and Rill Erosion

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Permanent ground cover > 90% and slope < 10%. Assessment level: The water erosion rate is <= T. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| The current crop rotation includes at least 2 crops (may include cover crops) in rotation of which at least one is a high residue crop. <see state list of high residue crops> | Yes ☐ No ☐ |
| A residue and tillage management system is implemented on all crops in the rotation that minimizes detachment and transport of soil particles caused by rainfall or irrigation. The system leaves crop residue on the soil surface and excludes primary inversion tillage implements (such as moldboard plow ). | Yes ☐ No ☐ |
| Irrigation water use is managed to reduce irrigation induced soil erosion. | Yes ☐ No ☐ |
| All hayed acres maintain at least 90 percent cover all year. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Wind Erosion

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Permanent ground cover > 90% and slope < 10%. Assessment level: The wind erosion rate is <= T. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| All hayed acres maintain at least 90 percent cover all year. | Yes ☐ No ☐ |
| The current crop rotation includes at least 2 crops (may include cover crops) in rotation of which at least one is a high residue crop. <see state list of high residue crops> | Yes ☐ No ☐ |
| A residue and tillage management system is implemented on all crops in the rotation that prevents detachment and transport of soil particles caused by wind. The system leaves crop residue on the soil surface and excludes primary inversion tillage implements (such as moldboard plow). | Yes ☐ No ☐ |

## Ephemeral Gully Erosion

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Ephemeral gullies are not occuring. Assessment level: Conservation practices and managements are in place to prevent or control ephemeral gullies. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| All temporary or permanent rills and gullies are stabilized. All areas expected to have high erosion rates are stable. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Classic Gully Erosion

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Classic gullies are not present. Assessment level: Classic gully management is adequate to stop the progression of head cutting and widening and are offsite impacts are minimized by vegetation and/or structures. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| All temporary or permanent rills and gullies are stabilized. All areas expected to have high erosion rates are stable. | Yes ☐ No ☐ |

## Streambank, Shoreline, Water Conveyance Channels

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Streams, shoreline or channels are not adjacent to site. Assessment level: For shorelines and water conveyance channels; banks are stable or commensurate with normal geomorphological processes, AND if bank erosion is present, it is beyond the client's control or commensurate with normal geomorphological processes, AND for streambanks, SVAP2 bank condition element score > 5. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Excluding all fundamentally unstable, natural geomorphic streambanks/shorelines, all streambanks/shorelines on the operation show few signs of erosion or bank failure. Each is stable and protected with natural materials. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Soil Quality Degradation

### Organic Matter Depletion

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Permanent ground cover > 80%. Assessment level: The SCI is > 0. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Cover crops that are not burned, grazed, or harvested are included in the rotation. | Yes ☐ No ☐ |
| A reduced/mulch till or no-till system is implemented. This system leaves crop residue on the soil surface and excludes primary inversion tillage implements (such as moldboard plow). | Yes ☐ No ☐ |
| All hayed acres maintain at least 90 percent cover all year. | Yes ☐ No ☐ |

### Compaction

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Soil compaction is not a problem AND activities do not cause soil compaction problems. Assessment level: Compaction is managed to meet client's production and management objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Soil moisture is tested to reduce soil compaction. Typical methods include moisture-by-feel or moisture meters. | Yes ☐ No ☐ |
| The crop rotation includes cover crops with deep roots that extend through the soil profile to break up compacted layers. <see state lists> | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

# Excess Water

## Runoff and Flooding and Ponding

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Ponding or flooding not a problem AND activities do not cause ponding/flooding problems. Assessment level: Excess water is managed to meet client's objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Excessive water runoff, flooding, and water ponding are not concerns; or measures are applied such as grassed waterways, terraces, diversions, filter strips to reduce excessive runoff; or if flooding is a concern crops and field activities are managed within the seasonal flooding periods; or where ponding is a concern land leveling or shallow surface drains prevent ponding of water that limits crop production. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

# Insufficient Water

## Inefficient Use of Irrigation Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: PLU is not irrigated. Assessment level: The irrigation system components and management result in a Farm Irrigation Rating Index > 60 AND meets applicable State in-stream flow and lake and pond water levels requirements. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| A residue and tillage management system is implemented on all crops in the rotation which keeps at least 60 percent of the field surface covered after planting to increase plant available moisture. | Yes ☐ No ☐ |
| An irrigation water management plan is followed that: -meets the crop's needs, while maximizing irrigation water efficiency, -schedules water application based on soil moisture monitoring and/or evapotranspiration monitoring, -measures and records the amount of water you use to irrigate as it comes onto the farm and goes to each field, AND-the system's distribution uniformity has been evaluated and necessary changes were made. | Yes ☐ No ☐ |

## Inefficient Moisture Management

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Moisture management is not a problem AND activities do not cause inefficient moisture management problems. Assessment level: Runoff and evapotranspiration levels are minimized to meet client's management objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Crops grown, varieties, and cropping order are carefully chosen. The local climate conditions and a water balance/budget are used in the decision making process. Crop rotation includes at least 2 crops in rotation. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

# Water Quality Degradation

## Pesticides in Surface Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Pest control chemicals are not applied. Assessment level: Pesticides are stored, handled, disposed and managed to prevent runoff, spills, leaks and leaching AND conservation practices and managements are in place to minimize surface water impacts. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Pesticides are applied using a site-specific mixture of prevention, avoidance, monitoring, and suppression (PAMS) strategies. Environmental risk screening tool are used (such as WIN-PST or similar LGU approved tool). Application rates and timing are compliant with the label and the conservation plan. | Yes ☐ No ☐ |

## Pesticides in Ground Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Pest control chemicals are not applied. Assessment level: Pesticides are stored, handled, disposed and managed to prevent runoff, spills, leaks and leaching AND conservation practices and managements are in place to minimize ground water impacts. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Pesticides are applied using a site-specific mixture of prevention, avoidance, monitoring, and suppression (PAMS) strategies. Environmental risk screening tool are used (such as WIN-PST or similar LGU approved tool). Application rates and timing are compliant with the label and the conservation plan. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Nutrients in Surface Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Organic or inorganic nutrients are not applied AND the PLU is not grazed. Assessment level: Nutrient and amendment applications are based on soil or tissue tests and nutrient budgets for realistic yields AND conservation practices and managements are in place to minimize surface water impacts. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Cover crops are grown to utilize excess nutrients. | Yes ☐ No ☐ |
| Livestock access to streams is limited to short periods of time and small areas. | Yes ☐ No ☐ |
| If nutrients are applied, a nutrient budget is used to determine all application rates, including: - Realistic yield goals, - Nutrient uptake requirements, and - Available nutrient accounting for each of the following: (a) N, P, K from representative soil tests (<= 3yrs), (b) Soil organic matter mineralization, (c) Legumes in rotation, (d) Previous applications of manure and other organic based materials, (e) Planned post-harvest residual soil test levels, (f) Available nutrient analysis for each nutrient source, and (g) Available nutrient uptake efficiencies from planned application rate, source, method, timing and placement. All state specific application setbacks are maintained for all nutrient applications. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Nutrients in Ground Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Organic or inorganic nutrients are not applied AND PLU is not grazed. Assessment level: Nutrient and amendment applications are based on soil or tissue tests and nutrient budgets for realistic yields AND conservation practices and managements are in place to minimize ground water impacts. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Cover crops are grown to utilize excess nutrients. | Yes ☐ No ☐ |
| If nutrients are applied, a nutrient budget is used to determine all application rates, including: - Realistic yield goals, - Nutrient uptake requirements, and - Available nutrient accounting for each of the following: (a) N, P, K from representative soil tests (<= 3yrs), (b) Soil organic matter mineralization, (c) Legumes in rotation, (d) Previous applications of manure and other organic based materials, (e) Planned post-harvest residual soil test levels, (f) Available nutrient analysis for each nutrient source, and (g) Available nutrient uptake efficiencies from planned application rate, source, method, timing and placement. All state specific application setbacks are maintained for all nutrient applications. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Surface Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Potential sources of pathogens or pharmaceuticals are not applied on the land. Assessment level: Organic materials are applied, stored, and/or handled to mitigate negative impacts to surface water sources. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Livestock access to stream is controlled OR limited to small watering or crossing areas. | Yes ☐ No ☐ |
| Manure and other biosolids are applied using a nutrient budget to determine all application rates, including: - Realistic yield goals, - Nutrient uptake requirements, and - Available nutrient accounting for each of the following: (a) N, P, K from representative soil tests (<= 3yrs), (b) Soil organic matter mineralization, (c) Legumes in rotation, (d) Avoiding manure applications when soils are frozen, snow covered, or saturated, (e) Planned post-harvest residual soil test levels, (f) Available nutrient analysis for each nutrient source, and (g) Available nutrient uptake efficiencies from planned application rate, source, method, timing and placement. All state specific application setbacks are maintained for all nutrient applications. Minimum setbacks are maintained from drainageways, wells, ditched, streams, rivers, and water bodies. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Ground Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Potential sources of pathogens or pharmaceuticals are not applied on the land. Assessment level: Organic materials are applied, stored, and/or handled to mitigate negative impacts to groundwater sources. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Manure and other biosolids are applied using a nutrient budget to determine all application rates, including:- Realistic yield goals,- Nutrient uptake requirements, and- Available nutrient accounting for each of the following:(a) N, P, K from representative soil tests (<= 3yrs),(b) Soil organic matter mineralization,(c) Legumes in rotation,(d) Avoiding manure applications when soils are frozen, snow covered, or saturated,(e) Planned post-harvest residual soil test levels,(f) Available nutrient analysis for each nutrient source, and(g) Available nutrient uptake efficiencies from planned application rate, source, method, timing and placement.All state specific application setbacks are maintained for all nutrient applications.Minimum setbacks are maintained from drainageways, wells, ditched, streams, rivers, and water bodies. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Excessive Sediment in Surface Water

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Permanent ground cover > 90% and slope < 10% AND classic gullies are not present AND streams or shoreline are not on or adjacent to site. Assessment level: Upslope treatment and buffer practices address concentrated flows to water bodies AND the SVAP2 - bank condition >= 5 AND the livestock and vehicle water crossings are stable AND The water erosion rate is <= T AND wind erosion rate is <= T. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Established filter strips are at least 20 feet wide and maintained. | Yes ☐ No ☐ |
| All temporary or permanent rills and gullies are stabilized. | Yes ☐ No ☐ |
| All hayed acres maintain at least 90 percent cover all year. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

# Air Quality Impacts

## Emissions of Ozone Precursors

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Operations are not present that produce ozone precursor emissions. Ozone precursor producing activities are: Engines (combustion source), Pesticide application, Burning, CAFO/manure management, Fertilization (manure/commercial). Assessment level: Ozone precursor emmissions are managed to meet client objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Ozone precursor producing activities are minimized by using one or more of the following activities: Reducing combustible engines exhaust via TIER 4 engine, applying IPM principles for pesticide applications, injection or incorporation of manure, nitrogen fertilizer incorportation or use of a nitrogen stabilizer. | Yes ☐ No ☐ |

## Emission of Greenhouse Gases (GHGs)

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Activities are not present that produce GHGs emissions. GHG producing activities are: Fertilization(manure/commercial), CAFO/manure management, Engines (combustion source), Tillage, AND GHGs are not regulated in this planning area. Assessment level: Greenhouse gas emmissions are managed to meet client objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| If Nitrogen is applied, Nitrogen is applied as close as possible to crop uptake needs at the recommended rates. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Degraded Plant Condition

### Undesirable Plant Productivity and Health

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Plant production and health is not a client concern. Assessment level: Plants are adapted to the site, meet production goals and do not negatively impact other resources AND plant damage from wind erosion is below Crop Damage Tolerance levels. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Plants and crops are adapted to the soil and site conditions and produce average yield levels for the county in typical years. | Yes ☐ No ☐ |

### Excessive Plant Pest Pressure

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Plant productivity is not limited from pest pressure. Assessment level: Pest damage to plants are below economic or environmental thresholds or client-identified criteria AND plant pests, including noxious and invasive species are managed to meet client objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| A crop rotation of at least 2 crops (which may include cover crops) that reduces plant pest pressures and breaks pest cycles is used. For example, crop rotation breaks pest cycles and allows for the rotation of chemical modes of action. | Yes ☐ No ☐ |
| Weeds, insects, and diseases do not limit crop production. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

# Fish and Wildlife - Inadequate Habitat

## Inadequate Habitat - Food

| Planning Criteria | Planning Criteria Met |
|---|---|
| Assessment level: The WHSI rating is >= 0.5 AND (when surface stream present) the SVAP2 - fish habitat complexity element score is >= 7 AND the SVAP2 - aquatic invertebrate habitat element score is >= 7, OR conservation practices and managements are in place that meet or exceed species or guild-specific habitat model thresholds, OR food is available in quality and extent to support habitat requirements for the species of interest. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Unharvested grain crops are intentionally left in the field as wildlife food on an annual basis. | Yes ☐ No ☐ |
| A no-till system is used that provides food for wildlife. The orientation of the residue between harvest and establishment of the new crop supports wildlife food. | Yes ☐ No ☐ |
| Plant growth and cover is managed to develop and maintain early successional habitat to help chosen wildlife species. <see State Wildlife Action Plan> | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Inadequate Habitat - Cover/Shelter

| Planning Criteria | Planning Criteria Met |
|---|---|
| Assessment level: The WHSI rating is >= 0.5 AND (when surface stream present) the SVAP2 - barriers to movement element score is >= 7 AND the SVAP2 - fish habitat complexity element score is >= 7 AND the SVAP2 - aquatic invertebrate habitat element score is >= 7, OR conservation practices and managements are in place that meet or exceed species or guild-specific habitat model thresholds, OR cover is of available quality and extent to support habitat requirements for the species of interest. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| A crop rotation that provides cover and shelter for wildlife is used. <STATE EXAMPLES--grain crops, forage crops, nectar or pollen producing crops, winter cover crops, contour strip cropping including small grain/hay> | Yes ☐ No ☐ |
| Plant growth and cover is managed to develop and maintain habitat to help chosen wildlife species. <see State Wildlife Action Plan> | Yes ☐ No ☐ |
| A no-till system is used that provides cover for wildlife. The orientation of the residue between harvest and establishment of the new crop supports wildlife cover. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

## Inadequate Habitat - Habitat Continuity (Space)

| Planning Criteria | Planning Criteria Met |
|---|---|
| Assessment level: The WHSI rating is >= 0.5 AND (when surface stream present) the SVAP2 - barriers to movement element score is >= 7 AND the SVAP2 - aquatic invertebrate habitat element score is >= 7, OR conservation practices and managements are in place that meet or exceed species or guild-specific habitat model thresholds, OR The connectivity of habitat components are adequate to support stable populations of targeted species. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| The land adjacent to a stream, river, or other waterbody on the side or sides you control does: - have diverse, natural plant cover typical to that along streams in your area, AND - extend from the stream bank/shoreline for a distance of 35 feet or (if applicable) the minimum State buffer-width requirement, whichever is greater. | Yes ☐ No ☐ |
| Connectivity between food resources and cover and shelter is provided for the chosen wildlife species. <see State Wildlife Action Plan> | Yes ☐ No ☐ |
| A no-till system is used that provides food and cover for wildlife. The orientation of the residue between harvest and establishment of the new crop supports wildlife food and cover. | Yes ☐ No ☐ |

# CSP-2017-1_IN - Ag Land_Crop Annual/Mixed

# Inefficient Energy Use

## Equipment and Facilities

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Client is not interested in improving equipment and facilities energy efficiency. Assessment level: Major componenets of a USDA approved energy audit have been implemented that address equipment and facilities to meet client objectives OR On-farm renewable energy and/or energy conserving practices have been implemented to meet client objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Recommendations/components of an energy audit have been applied. The audit addressed equipment and facilities on the farm. For example, energy loss from lighting, drying, refrigeration, heating, or building insulation have been improved. | Yes ☐ No ☐ |

## Farming/Ranching Practices and Field Operations

| Planning Criteria | Planning Criteria Met |
|---|---|
| Screening level: Client is not interested in improving equipment and facilities energy efficiency. Assessment level: Major componenets of a USDA approved energy audit have been implemented that address equipment and facilities to meet client objectives OR On-farm renewable energy and/or energy conserving practices have been implemented to meet client objectives. | Yes ☐ No ☐ |

| Evaluation Tests | Evaluation Test Met |
|---|---|
| Recommendations/components of an energy audit have been applied. The audit addressed field operations on the farm. For example, energy loss from driven equipment, irrigation, or pumping have been improved. | Yes ☐ No ☐ |